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UP IN THE AIR

The Royal Typewriter Air Truck experiment, the first of its kind in the world, has caused us to think. Endurance and altitude tests amaze us; trans-oceanic flights inspire us, but to the great mass of people, the potential users of air transportation, the Royal experiment is most convincing. A shipper of goods is able to visualize speedy and certain transportation of his products to distant corners of the country.

Air transportation has proved its value, not only in European countries but in this country. The air mail flyers of the U. S., during the last year, covered approximately twenty million miles and made their schedule about 96% of the time — a better record than the railroads of the country as a whole can boast, and it is important to note that of all the miles traveled by all classes of air craft there was only one fatality for each two million miles.

And yet we are still behind European countries in the development and utilization of air service for transportation. During 1926 there arrived and departed from Croydon Air Drome in England 26,500 passengers. During the period from April 1 to December 1, 1926, 3,945 trips were scheduled and completed, 16,775 passengers and 1,358,000 pounds of goods and mail were carried.

During 1926 the four important French air companies carried 13,633 passengers and 1,688,900 pounds of goods and nearly 340,000 pounds of mail. Germany too through its civil aviation organization carried 56,268 passengers, goods weighing 1,413,420 pounds and mail weighing 664,280 pounds.

The air mail of the U. S. is doing a splendid piece of work. To that extent the U. S. government is subsidizing civil aviation, but it is doing little financially to encourage private air transportation whereas in England, France and Germany, governmental subsidies are supplanted and the governments of these countries are making private civil aviation the backbone of their air system.

In recent addresses both Governor Trumbull and Mr. Charles B. Cook, Vice-President of the Royal Typewriter Company, pointed out with a certainty of opinion that is most convincing that New England will in time be dependent upon the establishment and utilization of the air as a means of transportation. What these men have had the vision to see must soon be seen by all if we are to hold our place industrially and commercially.

The Colonial Air Transport is here. Its service is definitely established and it is running daily on schedule practically unsupported by Connecticut shippers. It is incumbent upon those who are interested in New England's future to give all possible encouragement to the air lines. A group of philanthropic, far-seeing citizens should not be asked to carry the entire burden.

Edmund Howard

Making Diesel Engines at the New London Ship and Engine Company

By A. McCULLOCH

Here They Build Not Only Diesel Engines of All Sizes for Marine and Industrial Purposes, but Construct the Hulls of Submarines and Other Vessels in Which the Engines are Installed.

CONTRARY to the impression which seems to prevail rather generally, particularly near at home, the New London Ship & Engine Company manufactures Diesel oil engines for

pany signed there are included orders from the Southern Pacific Railway for twenty-four 500 H. P. engines; from the Diesel Electric Ferries Company for twelve engines for their



THE ADMINISTRATION BUILDING

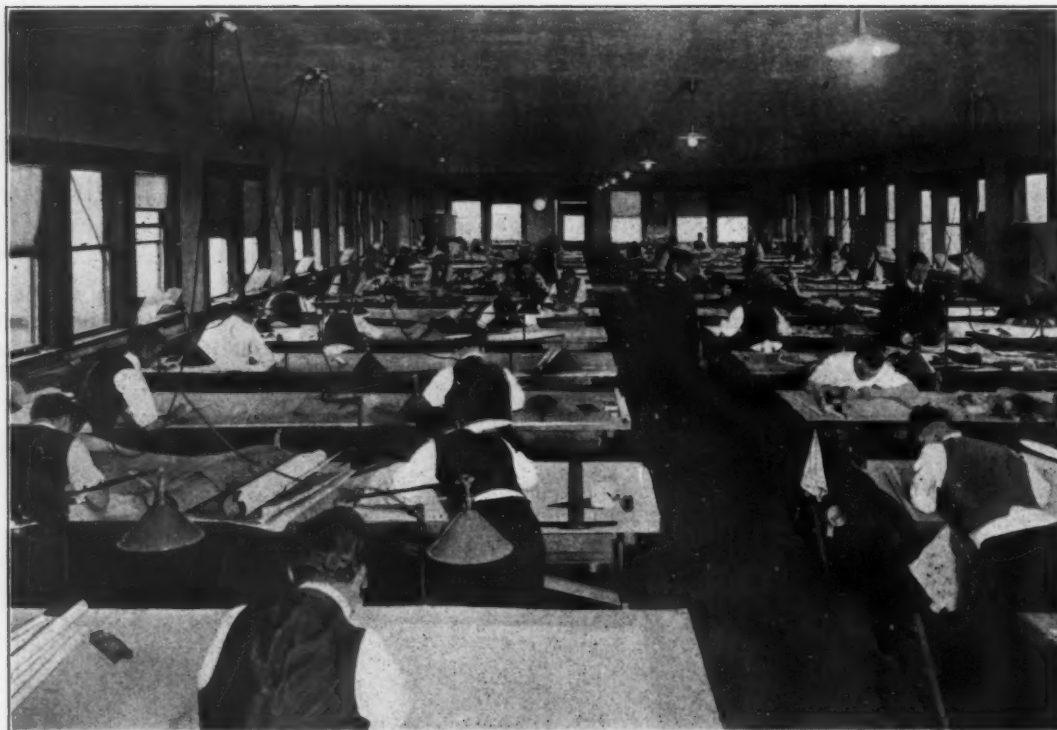
The Administration Building is situated at the top of a high hill and around it lie beautifully kept lawns and flower gardens. At the rear the ground slopes away abruptly to the Thames River and New London Harbor, and below on the banks of the river for a distance of a quarter of a mile in each direction, extend the various shops, shipways, etc. This is on the east bank of the river, in Groton.

factory power plants as well as for marine purposes.

Since its organization in 1910 it has built over 500 engines, both stationary and marine, ranging in size from 100 H. P. to the one just constructed for the United States Shipping Board which has developed 4200 H. P. In all a total of 243,300 horsepower is represented. In recent contracts which the com-

six ferries in use on New York Harbor; from the United States Shipping Board for the engine first referred to above, and from numerous commercial sources for Diesels ranging from 300 to 500 H. P.

The New London Ship and Engine Company was formed in 1910 by the Electric Boat Company, which designs and licenses the construction of submarines and is now affiliated



ONE OF THE DRAFTING ROOMS

A tour of inspection of the Administration Building takes one down corridors lined on either side with offices, many of them bearing the names of governmental representatives, who, when their orders are going thru, are required to inspect the work. Spacious rooms with light on three sides, house separate drafting rooms for the shipbuilding and for the engine departments.

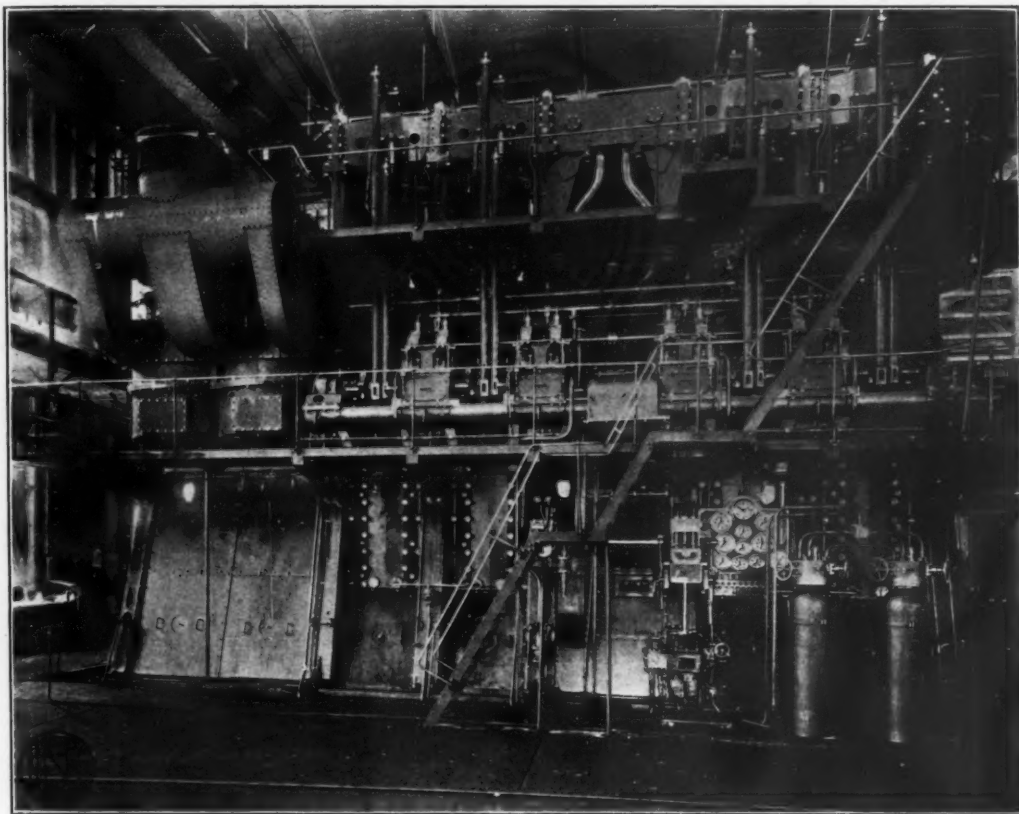
with it as well as with the Submarine Boat Corporation. The latter concern operates ships between the east and west coasts. In 1911, when the company, prompted by the industrial advantages of Connecticut, moved to this state, locating at Groton, its main business was the building of Diesel oil engines and other machinery for submarine boats. Hulls and all other sheet metal parts were made for them, under contract, by the Bethlehem Shipbuilding Corporation at their Quincy, Massachusetts, plant. By 1923 the company had concluded arrangements to build entire ships in its own plant and under its own supervision. The new yard was completed in 1924 and since that day the company has completed and delivered two submarines for the Government of Peru, a number of ferry boats and tugs and also done a great deal of repair work on large vessels. At the present time two more submarines are being built for the Peruvian Navy and while the sheet metal and other hull construction goes on in that division of the plant, interior fittings such as the great bronze and steel tubes for the

torpedoes are being made in another division. It will be readily understood that the production of the complete vessels, including both hull and engine, represents only one phase of either the submarine or commercial building, for the company has equipped submarines for the United States, Great Britain, Italy, Spain, Russia and other nations and has also installed engines in passenger boats, fishing vessels, ferries, tow boats, etc.

The yard is equipped with berths capable of caring for the building and launching of vessels 300 feet long by 80 feet beam and the electric traveling cranes, oil heated plate and angle furnaces, bending slabs, rolls, punches, shears, etc., used in the manufacture of the hulls, are of the most modern and improved type.

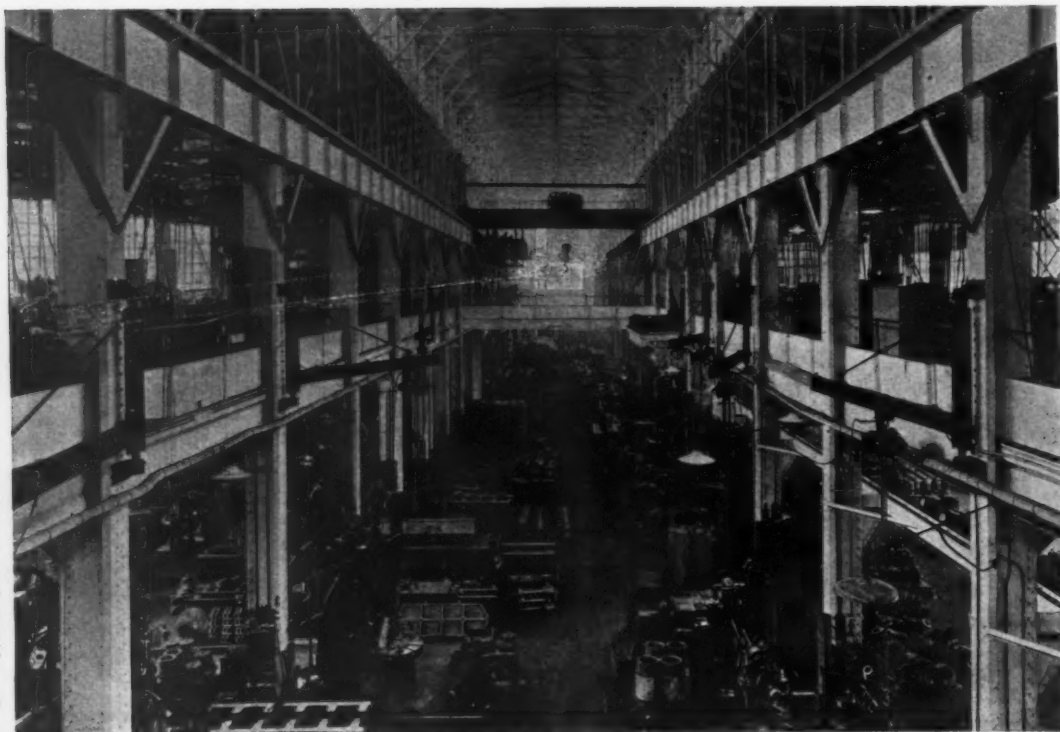
Design as well as construction of Diesel engined ferry boats complete has been a most important part of the work and the ferries, both large and small, include the direct drive and Diesel-electric propulsion.

The New London Ship & Engine Company



THE BIG DIESEL ENGINE JUST COMPLETED BY THE NEW LONDON SHIP AND ENGINE COMPANY

The Nelsco two cycle, double acting, air injection engine, built for the United States Shipping Board. At the time this article was prepared, and a representative of the Association visited the plant, the engine had then run 14 days on its 30-day test, with full load. It successfully completed the run, with no stops whatever for adjustments of any sort, bettering the requirements in every instance and consuming, during this period, less than one-half pound of fuel-oil per horsepower hour. At the conclusion of the test the engine was not stopped, but under a heavier load developed 4,000 H. P. over a period of six hours at normal speed and 4200 H. P. at a 5% higher speed. Engines of this type are rapidly replacing other installations in industrial plants throughout this country. Abroad, particularly in Germany, they have been in common usage for a longer period.



VIEW OF ONE END OF THE MACHINE SHOP

plant covers 35 acres and in addition to the shipyard, there is a two-story machine shop 700 feet long by 130 feet wide. The forge shop is equipped with drop hammers and steam hammers, large furnaces where the crankshafts and other parts of the Diesel engine are heat treated, also a foundry, carpenter shop, pattern shop, pipe shop and laboratory, all of which go to make up a complete organization for this class of work, and all thoroughly equipped with the most modern machinery, electrically driven by power produced by Diesel oil engines made in the company's own plant.

The tests on the big engine, an illustration of which is shown on page five, were carried on under the direct supervision of the Shipping Board and the engine itself

will be delivered to the Board for installation in the freighter Wilscox. The Wilscox will be the first of the first group of 12 steamships converted to direct Diesel drive, in the \$25,000,000 conversion program of the government. The thirty day period was selected for the non-stop test as it is the maximum run re-

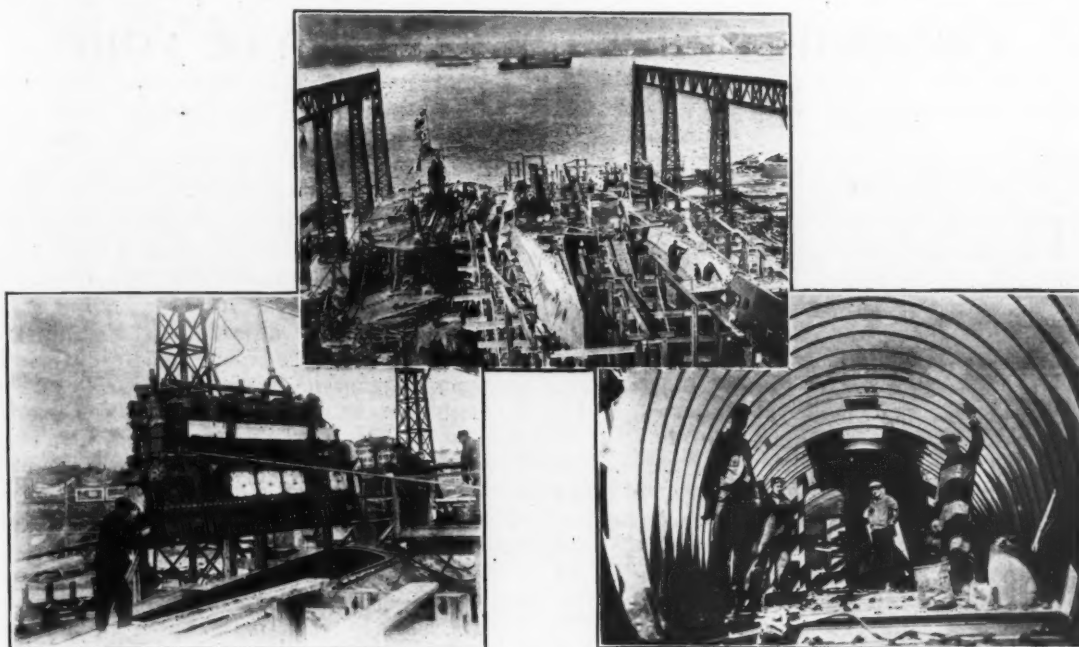
quired by a Shipping Board vessel. Bids have already been called for on the installation of the engine, work which will probably consume about six months. The Wilscox will then undergo the required sea trials and upon the conclusion of these will be ready for service.

Interesting as is the marine construction, it is only one phase, however. The installation, in industrial plants, of equipment such as that shown be-



TURNING CRANK SHAFTS

All cranks for the company's engines are forged and machined in their own shops.



THREE VIEWS IN THE SHIPYARDS

Above: Two submarines and a ferry boat in process of construction. Right: Interior view of a partly built submarine. Left: Lowering a 440 H. P. marine engine into a submarine.

low, is coming more and more to be recognized as a step of progress and the industrial engine production increasing correspondingly. Abroad, since 1897, when the first successful engine of this type was produced by Rudolf Diesel, they have come into common usage in both large and small plants, for general power purposes.

The *Nelsec* engines are made in four cycle single-acting type, ranging from 100 to 1200 H. P. and in the two cycle double-acting type, from 1,000 to 10,000 H. P., either mechanical or air injection and suitable for any power plans whether they be on shore or installed in yachts, dredges, or freight or commercial passenger vessels.



THE COMPANY'S POWER PLANT

Four 360 H. P. Diesel engines of their own manufacture, which have been supplying power at the New London Ship and Engine Company for the past 11 years.

Compensation is Only a Fifth of Your Accident Costs!

By H. W. HEINRICH

Engineering and Inspection Division of the Travelers' Insurance Company

THE familiar often takes on a startling significance when dressed up in new clothes. Mr. Man-in-the-Street knows, for instance, that the cost of government in this country runs into billions of dollars, but he is accustomed to hear billion-dollar talk and in the abstract it does not excite him. But let some one translate that budget into terms of his own share of it — let some one point out to him that he works a month and a half out of every year just to pay for the privilege of being governed — and he begins to look on economy of government with something more than an academic interest. Yet the fact was just as much a fact before he found it out as afterward.

So with industrial accidents. The employer knows they are costly, but as a general thing he has no true conception of their whole cost. He knows that his liability under state compensation acts costs him a certain percentage of his payroll, either as an insurance premium or as a reserve against a risk which he carries himself. He is prone to measure his total accident cost by this premium or reserve. If it were pointed out to him that industrial accidents are actually costing him five times that amount, most of which is a direct charge against his operating costs not amenable to insurance coverage, he would probably be astounded. Yet it is a fact, has been a fact, even though not generally known.

Safety engineers have often suspected that industrial accidents carried in their train certain expensive incidental costs, but there were no records, to my knowledge, definitely fixing the amount of these incidental costs until Travelers research went into the problem. Now as a result of the analysis of 5,000 accident reports taken at random from the Travelers records, we are able to show definitely that the compensation cost of the average accident represents only *one-fifth* of the total cost to the employer.

At last we have something specific. We need no longer deal in generalities. We need no longer refer merely to national "economic waste." We can now point to a *measurable monetary loss* to the employer, which cannot be compensated by insurance, and which demands

a remedy. Granted that the analysis of another 5,000 cases might show a higher or lower ratio, yet the truth still persists that a tangible incidental accident-cost actually exists; that it must be paid directly by the employer; and that it is sufficient in amount to justify the inclusion in plant routine of means to reduce it through systematic accident-prevention work. And, as one employer recently stated when confronted with his direct monetary loss, "It may not be four-to-one, but I can see that it is *something-to-one*, — and whatever it is, it is too much."

Employers will naturally want to know how my conclusion is arrived at. Let me give an itemized list of the main factors to be considered in calculating incidental accident costs, and illustrate the method of calculation by a few typical examples.

Factors in the Incidental Cost to Employer of Accidents to Employees

(Excluding compensation costs and cost of lost time, except when actually paid by the employer.)

1. Cost of lost time of injured employee.
2. Cost of time lost by other employees who stop work
 - (a) out of curiosity
 - (b) out of sympathy
 - (c) to assist injured employee
 - (d) for other reasons.
3. Cost of time lost by foremen, supervisors, or other executives as follows:
 - (a) assisting injured employee
 - (b) investigating cause of accident
 - (c) arranging for injured employee's production to be continued by some other employee
 - (d) selecting, training, or breaking in new employee to replace injured employee
 - (e) preparing state accident reports, or attending hearings before Industrial Commissioner.
4. Cost of time spent on case by first-aid attendant and hospital department staff,

when this time is not compensated by insurance.

5. Cost due to injury to the machine, tools, or other property, or to the spoilage of material.
6. Incidental cost due to interference with production, failure to fill orders on time, loss of bonuses, payment of forfeits, and other similar causes.
7. Cost to employer under employee welfare and benefit systems.
8. Cost to employer in continuing wages, in full, of the injured employee, whereas the services of the employee (who is not yet fully recovered) may be worth only about 50 per cent of their normal value.
9. Cost due to the loss of profit on injured employee's productivity and on idle machines.

I do not contend that this list includes *all* the factors which enter into incidental accident cost. This cost is so great that in substantiating my estimate of a four-to-one ratio I find it unnecessary to compute many losses which may be common and quite tangible, but which only the employer himself can evaluate. For example, in the cases below, lost time has been calculated in terms of *wages only*, whereas the production profit is also lost. Again, there has been no attempt to compute the loss in production, other than that of the injured employee and that of those directly implicated by the accident. All employers know something of the endless-chain effect of a serious injury upon efficiency and production. Losses occur too, in consequence of delays in fulfilling contracts. Furthermore, the business of selecting and training men is costly, and this cost is materially increased when, through accidents, labor turnover is increased. All of these things, and more, have purposely been omitted from the cases cited, and except in a few instances where actual figures were readily obtainable they were not included in the

5,000 cases on which the four-to-one ratio was computed. The omissions add strength to the estimate, and in a measure offset the criticism that there is too little exposure to justify such an estimate.

Specific illustrations, while seldom as conclusive as an ample amount of carefully compiled statistics, nevertheless serve a useful purpose. The following examples, taken from real practice, are typical, and are conservatively chosen to include only ordinary average conditions.

AIR-MAIL SAVES THE DAY

A MACHINE operated by a construction company in Plainville, broke down and all work was halted until repairs could be made. Each day's delay was costing the company \$500.

The replacement part had to come from Marion, Ohio. A telegram was despatched, instructing that it be shipped by Air Mail. It came the next morning, bearing 115 one-dollar stamps and twenty cents worth of special deliveries, a total of \$115.20.

Costly? Yes—but the net saving on one day's lost work alone, was \$384.80.

EXAMPLE NO. 1

Cost of compensation and medical aid, \$0.00. Additional *incidental* cost, paid directly by the employer, \$250.00.

Here is the record of an iron foundry that had successfully (?) carried on a no-accident campaign for three months. While there were no compensable or so-called lost-time accidents, there were 96 minor eye injuries, and burns from molten metal and hot castings. The incidental cost to the employer consists chiefly in the lost time of the injured men and of

their supervisors.

This case is a good example, from the cost view-point, of minor injuries. Experience shows that a substantial employer-cost results from trivial accidents that are *not compensable*, and do not require major medical attention.

EXAMPLE NO. 2

Total cost for compensation and medical aid	\$11.00
Total additional <i>incidental</i> cost, paid directly by the employer	\$49.00

An employee in a machine shop was injured while reaming a casting on an engine lathe. He attempted to grasp the "dog," which had started to revolve when the reamer pulled away from the tail-stock center. Three fingers were lacerated.

Note A—The incidental cost was computed as follows:

- \$33.00 Injured employe upon returning to work with his hand bandaged, was engaged for two weeks at work ordinarily performed by unskilled employes at a low wage rate. The employer, while paying full wages for two weeks, received but 50-per-cent value.
- \$ 8.00 Time spent by foreman and assistant superintendent in investigating damage to the tools and to the casting, and in planning the replacement of the ruined casting.
- \$ 6.00 Lost time of several employes who left their work to assist or sympathize with the injured man, and to discuss the accident.
- \$ 2.00 Cost of new reamer, to replace the one broken in the accident.

Note B—The cost of a new casting (estimated at \$50) is not included in this example, nor is the lost time (4 days) of the injured employe, because there may have been some salvage on the casting, and the employe received no wages while away from the shop.

Note C—The specific point of value in this example lies in the first item under Note A,—i. e., the wages of the convalescent employe continued at 100 per cent, while his services, being rendered on unimportant work, were reduced 50 per cent in value.

EXAMPLE NO. 3

Cost of compensation and medical aid \$ 25.00
Additional *incidental* cost, paid directly by employer \$140.00

A series of 17 accidents occurred to drivers and helpers in a trucking concern, 6 of which happened on outside work. These accidents consisted of the usual cuts and bruises so commonly experienced by truckmen.

Note A—The incidental cost was computed as follows:

- \$40.00 Cost of time lost by employes other than those injured.
- \$36.00 Cost of time lost by injured employe (paid by employer).
- \$32.00 Cost of loss of use of trucks and horses while delayed by accidents.
- \$26.00 Cost of damage to trucks, tackle, and other property of employer.
- \$ 6.00 Fine for disobeying city parking laws.

Note B—The men in this concern worked in crews of three or four, and often moved

heavy machinery or other objects requiring concerted handling. With one man being treated at a physician's office, the others were idle. One of the 17 accidents is typical. A crew of three men were moving a piece of heavy machinery, when one of the men lost his grip on a crowbar and let the machine fall, hurting his hand and damaging the flooring and the side of the truck. The employe was sent home by a physician and the two remaining men, being unable to handle the machine alone and receiving no assistance from headquarters, were obliged to drive away and come back the next morning. This example shows quite clearly that the time lost by employes other than the injured may be an important item in the incidental cost of an accident.

EXAMPLE NO. 4

Cost of compensation and medical aid \$ 86.50
Additional *incidental* cost, paid directly by the employer \$379.50

This is the story of six months' experience in a typical woodworking and pattern shop. The accidents were as follows:

Cases	Injury	Cause	Compensation and Medical Cost
1	Badly cut finger	Circular Saw	\$80.00
1	Laceration palm of hand	Chisel	6.50
12	Miscellaneous cuts	Hand tools	—
24	Slivers in hands	Handling material	—

The visible first cost here lies in the more serious but relatively infrequent accidents, while a great part of the "incidental cost" to the employer is due to the trivial cuts and bruises. One of the 24 cases of "sliver" injuries is of special interest. The employe was feeding a splitting saw when the board kicked back through his hands, with sufficient force to damage an expensive pattern of intricate design, with resultant property loss of \$86.00. In one of the twelve miscellaneous cuts, an operator of a small vertical boring machine was using a bit from the end of which the conical thread had not been removed. The work "rode the bit," carrying the employe's hand against the chuck, causing a slight injury to his hand and incidentally spoiling the work. This work, by the way, was the last section of an otherwise completed rush job, for which the purchaser was waiting. The order was canceled and the entire value of the work was lost.

The employe who was hurt on the circular saw was a skilled man and had to be replaced at once. His return created an additional

overhead expense because his employer for a time paid the salary of two skilled operators for work that either one could normally do alone.

Note A — The incidental cost is computed as follows:

- \$62.50 Time lost by injured employees.
- \$50.00 Time lost by other employees in consequence of the accidents.
- \$47.00 Time lost by foreman and superintendent, as a result of the accidents.
- \$90.00 Cost to employer in paying full wages (\$40.00 per week) to the employe upon his return to work, when he could be given work value of but \$10.00 per week (see foregoing explanation).
- \$86.00 Value of ruined pattern.
- \$44.00 Value of work and material of order canceled as a result of accidents.

Note B — This example includes only actual measurable losses. This employer lost the confidence of the customer, who canceled his order in pique on account of the delay, and "good will" as an asset was therefore impaired.

EXAMPLE NO. 5

- Total cost of compensation and medical aid \$ 50.00
- Total additional *incidental* cost, paid directly by the employer \$230.00

This comprises a group of 100 typical injuries in a clothing-manufacturing plant, and includes the usual cuts, bruises, and infections. Ten of the injured employees were treated by physicians, and the others required first aid only.

The incidental cost was computed as follows: (production loss excluded)

- \$90.00 Lost time of 90 injured employes (1 hour each at 50 cents per hour) (2 hours each at 25 cents per hour).
- \$40.00 Lost time of 10 injured employes (4 hours each at 50 cents per hour) (8 hours each at 25 cents per hour).
- \$50.00 Time spent by foremen and supervisors ($\frac{1}{2}$ hour for each accident, at \$1.00 per hour).
- \$25.00 Repairs to machines damaged by accidents.
- \$25.00 Lost time of other employes who stopped work to assist or sympathize or out of curiosity. (This includes 15 minutes lost by two employes, at 40 cents per hour, for each accident).

EXAMPLE NO. 6

- Cost of compensation and medical aid \$ 22.00
- Additional *incidental* cost, paid directly by the employer \$107.00

An operator of a hot drop forge press sustained an eye injury by flying hot scale. The assistant foreman substituted for three days so that an important order could be filled on time.

Note A — The incidental cost was computed as follows:

- \$50.00 Cost of time lost by employes who depended upon the assistant foreman for advice and instruction.
- \$30.00 Cost of time lost by the assistant foreman, in addition to that which he would have spent in supervision as indicated by foregoing item.
- \$12.00 Cost of time spent by the safety committee in the analysis and investigation of the accident.
- \$10.00 Cost of time lost by the injured man (paid by the employer).
- \$ 5.00 Cost of time lost by other employes when the accident occurred.

Note B — This example illustrates another point in incidental cost, — namely, that in filling the gap caused by an injured employe's absence, and in maintaining production, other important work is often neglected.

It would be easy to give many other examples of this same kind, but those here presented are sufficient to show that at least *some* accidents cost the employer a great deal more than is represented by compensable claims and medical services. To show that a far stronger case could be established by including the unusual, let me cite the following instances in which there were "incidental" losses of special nature:

1. The sale of a fleet of automobiles was lost in consequence of delay in delivering a car, on account of a hand-cranking accident.
2. A huge construction job was held up by city inspectors on account of violations of safety principles, and consequent accidents.
3. Claims made against a public utility (and loss of revenue also) on account of a minor accident causing a short-circuit.
4. Injury to an engineer, who was fixing a feed pump, caused low water and the destruction of a steam-boiler battery.
5. Stumbling and a minor foot injury to an

(Continued on page 17)

The New Haven Machine Tool Exhibit

MANY members of the Association will exhibit at the Seventh Annual New Haven Machine Tool Exhibit, to be held in Mason Laboratory, Sheffield Scientific School, Yale University, September 6-9 inclusive.

Although New Haven, with its unexcelled University facilities and its enthusiastic and hard-



INTERIOR OF MASON LABORATORY DURING ONE OF THE PREVIOUS MACHINE TOOL EXHIBITS

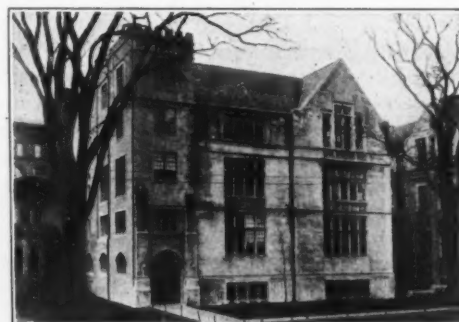
working committee, is without question of doubt the logical place in which to hold these exhibits, the name itself has nevertheless been somewhat of a misnomer for the affair is actually too broad in its scope to be considered in any sense as local. Its purpose, in addition to fostering exchange of ideas among machine tool manufacturers and educating the public concerning the machine tool industry, is to show the most modern machine tool equipment to Connecticut and New England buyers. This year it is expected that an even larger number will attend

from northern and central New England, swelling the attendance well beyond the 20,000 mark reached in 1926.

Within a radius of 500 miles of New Haven there are 13,393 metal working plants, all of which use machine tools. This is practically 45% of all metal working plants in the entire United States.

To the New Haven Section of the American Society of Mechanical Engineers must go great credit for having conceived the plan of such a series of exhibits, as far back as 1921. It found ready supporters in the Department of Mechanical Engineering of Sheffield Scientific School and the Chamber of Commerce and the exhibit is now operated on a non-profit-making basis, by a committee representing these three groups.

This year a series of technical sessions will be held, each evening of the exhibit, in Dunham Laboratory. New developments and problems in the manufacture and use of machine tools will be discussed and the meetings will be held under the leadership of the Machine Shop Practice Division of the American Society of Mechanical Engineers.



DUNHAM LABORATORY

where evening meetings will be held for the discussion of manufacturing problems



AERIAL VIEW OF THE GENERAL ELECTRIC COMPANY PLANT AT BRIDGEPORT *Photo by Fairchild*

At the left is the power plant, with the main operating division in the center foreground. The Bridgeport plant is headquarters for the manufacture of merchandised products of the company, including, among others, electric fan motors, wire and cable, flexible conduit, welding electrodes, etc. This is the eighth of a series of such views now being published in Connecticut Industry.

Industrial News Around the State

HUMISTON HEADS IVES COMPANY

At a recent meeting of the board of directors of the H. B. Ives Company of New Haven, manufacturers of builders' hardware, L. A. Humiston was elected president. Mr. Humiston who was formerly sales manager, succeeds the late H. B. Ives, founder of the company, who died a year ago.

CLUETT, PEABODY FORM CANADIAN COMPANY

Cluett, Peabody & Company, Inc. of South Norwalk, has announced the organization of a subsidiary firm in Canada, with headquarters at Montreal. The manufacture and distribution of lower priced fancy shirts will be handled at this division and H. L. Warren, formerly manager of the shirt department of Alphonse Racine Company, will be in charge.

PRATT & WHITNEY AIRCRAFT EXPANDS

The Pratt & Whitney Aircraft Company of Hartford will increase its working space and add approximately 50% to its working force, due to recent large government orders. The company now occupies all five floors of its pre-

sent building and the offices which now occupy the first floor will be moved to new quarters to be built on the roof and the first floor will be given over to manufacturing.

Anthony Fokker, the noted airplane designer, is now building a mammoth monoplane bomber for the United States government, which is to be equipped with two Pratt & Whitney motors. The plane will have a wingspread of 90 feet, carry two machine guns, and, when loaded will weigh approximately 15,000 pounds, of which 2,000 pounds will be explosives.

INTERNATIONAL SILVER BUYS NEW ATHLETIC FIELD

The International Silver Company of Meriden has purchased a tract of land on the outskirts of that city which will be developed as a park and athletic field for the company's employees. The company's plans call for the laying out of two baseball diamonds, a football field, running track, six tennis courts, a grandstand to seat about 1,000 persons, shower baths, dressing rooms, etc.

A large parking space at one side will also be provided for and particular pains will be taken through careful landscape gardening to make the field an attractive addition to the already large park system of Meriden.

BRIDGEPORT TOY COMPANY REORGANIZES

A recent reorganization has been effected at The Ives Manufacturing Corporation of Bridgeport and the capital stock will be increased to 6,000 shares of common stock of no par value and 1,250 shares of second preferred, without par value.

H. C. Ives has been elected chairman of the board of directors; C. R. Johnson, president, Miss M. S. Platt, assistant treasurer and C. H. Silliman, secretary.

The company now has branches and showrooms in New York and San Francisco and will shortly establish a showroom in Chicago.

JORDON MILLS REOPEN

The Jordon Mills, Inc. of Waterford, closed since May 1926, will shortly re-commence operations, employing approximately seventy hands in the manufacture of worsted suitings.

The concern has recently been incorporated and the present officers are James Bathgate of New London, president; George A. Wino, East Lyme, vice-president; George H. Bathgate of New London, secretary and treasurer.

NEW HAVEN RAILROAD TO PAY ACCOUNTANTS BY CHECK

The New Haven Railroad has established the pay-by-check system for all accountants on its lines, and it is expected that other departments will be included later.

WIRE MACHINERY COMPANY INCORPORATES

The New England Wire Machinery Company of New Haven has been succeeded by a newly incorporated organization known as the Wire Machinery Corporation of America. Raymond B. Gerard, president of the New England Company is also president of the newly incorporated business.

NEW WINSTED CONCERN

The Winsted Insulated Wire Company is a newly incorporated concern which will manufacture enamel and other insulated wires for motors, radios and similar purposes in the plant formerly occupied by the Benjamin Richards Company of that city. Fifteen sizes of enamel wire will be made, the smallest of which is finer than hair gauge and a building will shortly be erected for making the enamel, according to company announcements.

At a recent meeting the following officers were elected: James E. Sweet, president; A. T. Steele, secretary; Frank B. Wheeler, treasurer.

CARY NEW PRESIDENT OF BRYANT ELECTRIC

Waldo C. Bryant, president of the Bryant Electric Company of Bridgeport, has resigned that position and assumed the chairmanship of the board of directors of the company. He is succeeded as president by Walter Cary, vice-president of the Westinghouse Electric Company and president of the Westinghouse Lamp Company.

Mr. Bryant entertained a large gathering of executives of electrical concerns at the University Club, New York, in honor of Mr. Cary.

BOLT COMPANY TO MOVE TO MILFORD

The Columbia Nut and Bolt Company of Bridgeport will move to Milford and occupy, with the Atlantic Manufacturing Company, property which the latter company holds. Announcements state that executive and sales offices will remain in Bridgeport.

KIRBY PLANT ENLARGED

The Kirby Manufacturing Company of Middletown, makers of bell toys, chimes, etc., has recently moved into quarters formerly occupied by the Elam Strong Paper Box Company. The new space is considerably larger than the company's old factory and will permit of considerable expansion.

ADMINISTRATION OF CHENEY BROTHERS CHANGED

Recent announcements made by Cheney Brothers of South Manchester state that the administrative arrangements of the company have been altered to permit of a system of functional control by which each manager of the present independently controlled departments, will have supervision of one line throughout the entire plant. There will be six main "controls", namely purchasing, style originating and quality, financial and accounting, sales, production, and industrial relations. There is no reorganization and the company's policies and activities will remain under control of the board of directors, as at present.

NEW CONCERN IN HARTFORD

The Connecticut Electric Steel Company plant at Hartford, inoperative since shortly after the war, has been leased by the Hartford Electric Light Company, owners, to John D. Scott, a steel expert. Employment at the out-set will be given to about thirty operatives.

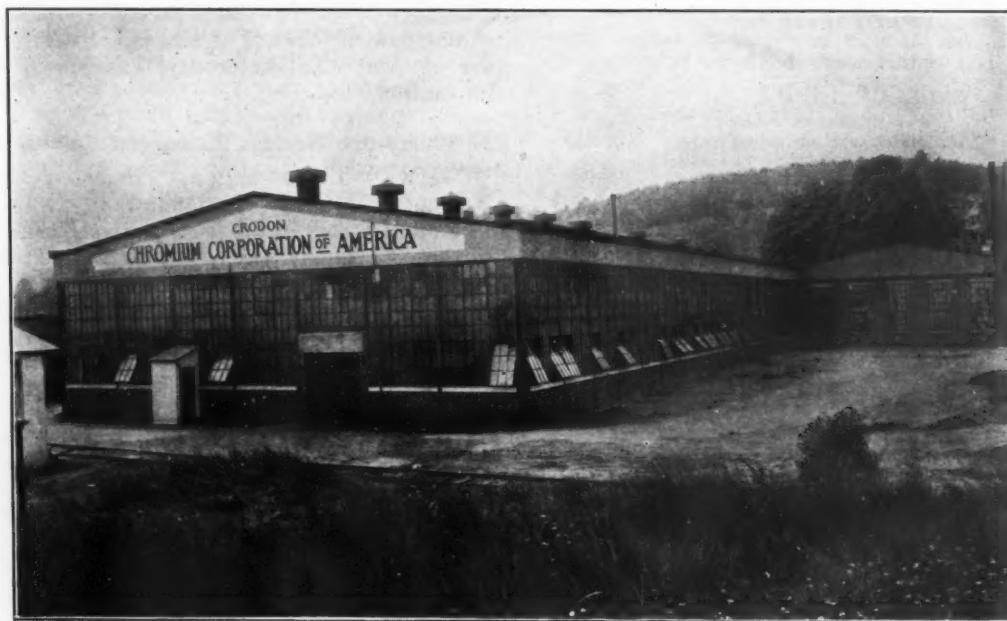
New Industries of Connecticut

6. — Chromium Corporation of America

By W. A. DOWER

ABOUT fifty years ago scientists discovered that chromium deposited on any of the baser metals gave that metal certain qualities of hardness, non-corrosiveness and heat resistance, which no other treatment was able to

The chief business of this company is the licensing of installations under their patents, although they also do contract plating work. In addition, the facilities of the Waterbury plant are used to provide an interim service to



VIEW OF A PORTION OF THE CHROMIUM COMPANY PLANT

effect. It was only within the last two or three years however, that this has been developed commercially.

The patents on the process were controlled largely by two companies, the Chromium Products Corporation and the Chemical Treatment Company. A few years ago a combination was effected by these two leaders in the chromium plating industry under the name of the Chromium Corporation of America, with the idea of presenting to the industry the benefit of the combined research and patent position and the technical facilities of the two organizations.

The Chemical Treatment Company had commenced operations in Waterbury shortly before this merger and the present plant contains about 30,000 square feet of floor space and is the largest chromium plating factory in the United States. It houses, besides the manufacturing department, a complete research and engineering department.

manufacturers who contemplate installations.

The advantages of chromium plating make it applicable to many industries, besides its use in stainless steel for cutlery. Its non-tarnishing characteristic is particularly advantageous for bright work in the automotive trade. When applied to a smooth surface it takes a high lustre similar to nickel plate and its extreme hardness — chromium ranks nine to the diamond's ten in the metallurgical hardness scale — makes it particularly applicable to uses in which hardness is a requirement such as drawing and stamping dyes. It has a wide utility also in the heat resistance field and as a non-corrosive agent.

The officers are Dr. F. H. Hirschland, president; John T. Pratt, chairman of the board; Dr. E. A. Beck, vice-president; R. O. Loengard, vice-president, and John T. Pratt, Jr., secretary-treasurer. Offices are at 26 Broadway, New York City, and plants are maintained also in Jersey City, New York and Chicago.

Cinderella Up-to-Date

By HOWARD C. WILSON

Howard C. Wilson & Associates, Inc.

There was once a little girl
And she didn't have a fella
She was just a cinder wench
And her name was Cinderella.

Her wardrobe it consisted
Of a ragged torn wrapper
But she could have made the Follies
And she might have been a flapper.

Her jealous, snooty sisters
Were invited to a ball
And didn't have an inkling
They were "riding to a fall."

With petticoats and flounces
And all their other fluff
They tightened up their stays
Which was sure "old stuff."

But the fat and ugly sisters
Really pulled an awful bone
When they left poor Cinderella
Sitting home there all alone.

They parked her in the ashes
Just left her there to fret
And made it quite apparent
They thought her quite "all wet."

Her nose looked red and shiny
The tears began to pour
When a little fairy asked her
"What are you crying for?"

"I'm sick of work and ashes
I want to be a belle
Tear off a hectic party
And raise a little hell."

The fairy waved a magic wand
She made a coach and four
Then all decked out to the prince's ball
Our Cinderella tore.

The ladies of the Royal Court
Then staged an awful row
For the Prince thought Cinderella
Was certainly a "wow."

She went again the second night
Still looking just as kipper
But when she left the Prince at twelve
She also left her slipper.

The Prince was inconsolable
And said "She shall be mine."
She surely must have handed him
A mean and potent line.

The young Prince sent a herald round,
The slipper in his hand.
He vainly tried to make it fit
Each lady in the land.

He tried it on the sister's feet
Their clumsy hoofs got stuck
And then he spied the cinder wench
And said he'd try his luck.

Now Cinderella took a chance
She knew she had a cinch
The slipper fit her perfectly
And didn't even pinch.

The Prince was waiting at the church
She hailed him with a smile
The slipper's mate and his for life
Went tripping up the aisle.

New Member

SINCE the last issue of *Connecticut Industry* one new member, The Chromium Corporation of America, Waterbury, has joined the Association.

Thirty-two Nations Exhausted Quotas

THIRTY-TWO nations exhausted their quota allotment for immigrants entering the United States in the fiscal year 1926-1927. Of these Germany sent the greatest number, 45,810. Great Britain ranked second, sending 31,714 and the Irish Free State was third with 28,475.

The State Fair Survey

IN order to broaden the scope of the Connecticut State Fair, the directors of that body have voted to undertake a state-wide survey to ascertain exact conditions and determine a future public and financial policy.

The survey will be conducted by an organization specializing in counseling and financing fairs and very considerable interest is being shown in the final outcome of this. It is hoped that permanent buildings will be erected in the not too far distant future and that the demand may be met for year-round accommodations for various groups and interests which require athletic facilities as well as accommodations for club and similar work.

"The State Fair," says President Henry Trumbull, "not only serves business interests but performs a splendid work in the education of the boys and girls of Connecticut. Thousands of boys and girls are competing in their communities for the honor of representing these same towns at the State Fair, with their best exhibits. While a State Fair is not often thought of in terms of leadership, basically that is its greatest purpose."

"Every minute that you save by making it useful, more profitable, is so much added to your life and its possibilities. Every minute lost is a neglected by-product — once gone, you will never get it back." — Brisbane.

COMPENSATION A FIFTH OF ACCIDENT COSTS

(Continued from page 11)

employe in a chemical plant caused the accidental and premature mixing of a batch of chemicals and spoiling of costly materials.

These specific things might not happen again, but others, parallel to them in a certain sense, are likely to occur with considerable frequency; and the omission of all experiences of such special types fortifies the main argument.

Up to this point I have said nothing of accident *prevention*, chiefly because of the belief that a strong incentive, such as that herein presented, is first of all necessary before preventive work will receive a full measure of recognition as a worthwhile part of plant routine, and be placed on a fully systematic and effective basis. The actual work of accident prevention depends, first of all, upon recognition and knowledge of the fundamental truths involved; second, upon individual plant analysis by a trained engineer; and third, upon securing the cooperation of the employer in applying the remedy determined by the engineer's analysis. The first two of these conditions exist today to an extent that should produce results, but the kind of an incentive that will secure the employer's cooperation, as indicated in the third condition, has heretofore been lacking, or at all events weak. If, therefore, in this presentation of the "incidental cost of accidents", I have succeeded in arousing the interest of the employers, or have spurred on statisticians either to substantiate my statements or to qualify them, I shall be satisfied that a forward stride has been made that must prove of immense economic and humanitarian value to employers, to employes, and to the public at large.

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M. A. C's Views on Current News

In these days of silk stockings there are a great many candidates for the "hole in one" club.

* * *

Henry Ford says the country has reached the saturation point. Was he speaking of automobiles or bootleg liquor?

* * *

We spent last Saturday afternoon and Sunday at golf after a long lay-off from the game. We know now why someone has called it a "week-end" sport.

* * *

Lindy didn't want to be a tin god so he smoked a cigarette to put a crimp in the anti-tobacco league's propaganda. He is a lad with courage and sense.

* * *

Headline — "Girl faints at sight of lobster." Wonder what the big lobster said to her.

* * *

The play "Crime" is to open in Chicago. We predict an early closing for there is too much free competition.

* * *

Headline — "Arrested for driving horse when drunk." An animal in that condition ought to be allowed to take its own time — Boy call the SPCA.

* * *

Yes, William, it is true that Chamberlin, the trans-Atlantic flyer can't swim, but then Gertrude Ederle can't fly. However we understand that flying fish can swim, so figure it out for yourself.

* * *

Headline — "Appeal from death sentence because of position of semi-colon." Earl Carroll tried to avoid a sentence through a comma.

"If you have no problems in your business, if you are perfectly satisfied with your product, your processes and your costs in all respects, if you have no trouble from competition or other sources of worry, and are sure you are not going to have any for ten years to come, then you MAY not need research."

(M. C. Kettering, President, General Motors Research Corp.)

Transportation

HARTFORD BOAT LINE RATES

Two additional routes have been established by the Hartford and New York Transportation Co., one to Duluth, St. Paul and other sections of Michigan, Minnesota and Wisconsin and the other to all of Central Freight Association territory. This company is opening up the B. & O. route via the Hartford Boat line. Rates are now in effect all the way from the Atlantic seaboard to the Mississippi River, including the northwest territory of St. Paul and Duluth and it should also be noted that rates west of the Mississippi are based on the Mississippi combinations up to the Pacific coast blanket points. A large territory west of the Mississippi is also opened up.

CAR LOADING AND DISTRIBUTING

The Universal Car Loading and Distributing Co. plans to enter the Connecticut field. The company will begin operation in Waterbury, Hartford, New Haven and Bridgeport September the 1st. Officials of the distributing company who plan a pick-up and delivery service from these Connecticut points to St. Louis and Chicago are to have a conference with the joint committee of the Manufacturers' Association and the New Haven road in the near future in order that a clear understanding of the proposal can be obtained. Members may receive complete information by communicating with the Association's headquarters.

UNIFORM DOCK RECEIPTS

The Traffic Committee of the Association is in receipt of the tentative uniform steamship dock receipt which has been compiled after corrections by the Trans-Atlantic Freight Association. This form is in triplicate and was approved by the Traffic Committee at its last meeting. Members who have occasion to use this receipt should inform themselves concerning it since it will be finally approved or disapproved at the September meeting of the Steamship Conference.

MEETING OF TRAFFIC COMMITTEE

The annual shore meeting of the Traffic Committee was held at Cox's Restaurant, Savin Rock, on Friday, August 12, Mr. W. H. Pease, the new chairman, presiding. Besides the members of the Traffic Committee and regular representatives of the railroad there were present President Hubbard and Vice-President Goss of

the Association, Mr. J. O. Halliday, Manager of Transportation, New Haven Railroad, and Mr. Potter of the Bigelow-Hartford Carpet Company. The next meeting will be held early in September. Members having any transportation difficulty connected with service, rates or classification should communicate with the Association's headquarters by the first of September.

NEW YORK CENTRAL RATES TO HARLEM AND PUTNAM DIVISION

The New England Freight Association in docket bulletin 424, item 12779, has a proposal stating through rates from points on the N. Y., N. H. & H. R. R. to New York Central points on the Harlem and Putnam Division. Representatives of the sub-committee on rates of the Traffic Committee have interviewed officials of the N. Y., N. H. & H. R. R. and the New York Central, and the Association has asked to be heard by the New England Freight Association on the subject. Preliminary investigation seems to indicate that the rates will be established.

NEW ENGLAND DEMURRAGE COMMISSION

Rumor has it that the New England Demurrage Commission, a bureau established in 1903 by the New England lines, is to be abolished, as far as its present organization and functions are concerned. Connecticut shippers have in the past derived considerable benefit from this service but it is understood that the cost of maintenance is the principal factor in the proposal for its rumored discontinuance.

CONNECTICUT GASOLINE COSTS

In cooperation with other organizations the Association is privately conducting an investigation of the reasons for the apparent high cost of gasoline to Connecticut users. Members having any information or complaints in regard to the subject can aid materially by forwarding the facts to the Association's headquarters.

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Stock bins

300 wooden stock bins, 4' square with sliding doors. Could use carload of shooks which might be made part of trade.
Address S. E. 171.

One gas carbonizing furnace

Double cylinders 8" x 47" inside measurements, revolving type.

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One #2 pressure blower

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20. FOR SALE. In Willimantic, plant equipped with machinery to manufacture grey cotton goods, 10,000 spindles and 198 40" looms. Also, 20 acres of land on both sides of river, complete power rights, capable of developing 200 H. P., now developed to 160 H. P. Run and lighted by water, equipped with steam for emergency use. Warehouse on Central Vermont siding, 16 cottages with 32 tenements, boarding house, superintendent's house, stable and garages.

18. FOR RENT. In Meriden, about 50,000 sq. ft. in any one of several buildings, all of heavy mill construction. Owner is now using part of plant but would rearrange to suit tenant. Diagram of layout will be sent upon request.

19. FOR SALE. In Middletown, frame factory buildings, 2½ stories 13,000 sq. ft. Wired for light and power and equipped with boiler for heating and process steam. Heavy floors suitable for drop press work. Delivery platform. Land 200' deep by 100' wide. Blueprint may be seen upon request of this office.

Employment Service

This department is open to members free of charge. All copy must be in the hands of the editor by the fifteenth day of the month preceding publication.

COST ACCOUNTANT—Age 35. Single. University graduate. Five years' experience covers cost accounting, expense analysis in machine tool manufacture and production clerk. Address P. W. 275.

TRAFFIC MANAGER—A Connecticut man with ten years' experience as freight and commercial agent at large stations of New Haven Railroad and one year loading and routing freight. Anxious to make connection at once with a manufacturing concern. Address P. W. 276.

SALESMAN—Man with experience in office routine and salesmanship desires position in either capacity with a Connecticut manufacturer. Address P. W. 277.

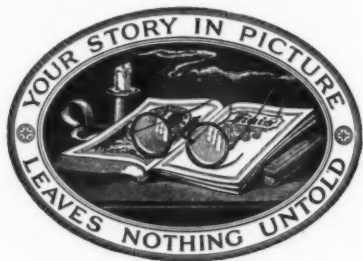
ACCOUNTANT—Age 39. Married. Twenty years' manufacturing experience in office work, at present employed as accountant and office manager. Address P. W. 278.

GENERAL MANAGER—American, married, age 39. University graduate with degree of mechanical

engineering. Served apprenticeship in machine shop. Connected with Westinghouse organization doing economic research work, which gave valuable diversified experience on all kinds of motors, engines, etc. Also versed in details of industrial management such as planning, routing, purchasing, time and motion study, budgets, sales promotion and market analysis. Address P. W. 272.

ENGINEER—Age 30, married. Graduate Worcester School of Technology and 1 year at University. Two years' experience in underground cable work. Desires outside engineering work or engineering salesmanship. Address P. W. 273.

GENERAL MANAGER—Cornell graduate, former resident of Connecticut, seventeen years' experience in industrial field, mostly in middlewest, wishes to re-establish himself in New England in position of general manager, assistant, or assistant to the president. Versed in details of industrial management, such as planning, time and motion study, budgets, sales promotion and market analysis. Address P. W. 274.



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